

Attachment A  
Report of Robert Rauschenberger



September 12, 2013

Robert M. Baker, Esq.  
Lewis Wagner, LLP  
501 Indiana Avenue, Suite 200  
Indianapolis, IN 46202  
VIA E-MAIL

Subject: FTC v Hold Billing Services et al.  
Project No.: 1306303.000

Dear Mr. Baker:

Pursuant to your request, I am providing the following report, summarizing the work conducted by Exponent<sup>®</sup> Failure Analysis Associates ("Exponent") in the matter of FTC v Hold Billing Services et al. I have reviewed case-specific materials (listed in the appendix to this report), as well as scientific literature related to human performance, warnings, safety communication, and the psychology of post-purchase behavior. The report describes my findings to date. The opinions contained therein are based on my education, training, and experience, as well as on my review of the aforementioned materials. The opinions proffered in the report are rendered with a reasonable degree of scientific certainty. I reserve the right to supplement the report and to expand or modify my opinions based on review of material as it becomes available through ongoing discovery. Should I be asked to testify in this case, I plan to use excerpts and charts from the materials I have cited in this report. A copy of my resume is attached as an appendix to the report.

## **INTRODUCTION**

### **Qualifications**

I received a Ph.D. in cognitive psychology from The Johns Hopkins University. I am currently employed as a managing scientist in the human factors practice at Exponent and until recently held an adjunct professorship at the School of Interactive Arts and Technology at Simon Fraser University, Vancouver, BC. Over the past fifteen years, I have conducted research on the way humans process information, perceptually organize information, attend to various aspects of the visual world, and interact with technology. This research has been funded by the National Science Foundation, for which I also serve as grant reviewer. I have authored peer-reviewed articles on visual perception, visual attention, and human-machine interaction, published in scientific journals and conference proceedings, and have, in turn, provided my own peer review as grant selection committee member, editorial board member, and as reviewer for over a dozen

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scientific journals. Presently, I serve as the program chair for the healthcare technical group of the Human Factors and Ergonomics Society, of which I am also a member. I am furthermore a member of the Psychonomic Society, which requires a nomination by a senior member and the fulfillment of certain criteria that are indicative of productive post-graduate research activity. Past professional memberships include the Visions Sciences Society (VSS), the Association for Research in Vision and Ophthalmology (ARVO), and the Association for Computing Machinery's (ACM) Special Interest Group on Human-Computer Interaction (SIGCHI). I am regularly invited to present my research to scientists at research laboratories in both industry and academia, in the U.S. as well as abroad. Prior to joining Exponent, I managed the research in human factors and user experience at Siemens Corporate Research, for the entire breadth of the Siemens portfolio, which includes medical, industrial, consumer and web-based products and services. I have designed and tested user interfaces for products and services in all of these industries; I have developed product warnings, used scientific methods to evaluate the usability of products, and used large-scale databases maintained by the Food and Drug Administration (FDA) and the Consumer Product Safety Commission (CPSC) to evaluate consumers' interactions with products. Exponent presently bills my time at a rate of \$285 an hour.

## Methods

For the present case, to evaluate the design and usability of the webpages involved in the subject litigation, I considered, among other things, the allegations levied against these webpages; the visual design of, and representative users' interactions with, the webpages; documents authored by the Federal Trade Commission (FTC) regarding on-line disclosures; and peer-reviewed, published literature on consumers' responses to disclosures of potentially negative consequences, on the myriad reasons consumers may subscribe to services online (whether wittingly and intentionally or not), and on consumers' post-purchase behavior. The following report is based on findings from the empirical data collected using the scientific method, the data provided by Smiley Media, Inc. ("Smiley"),<sup>1</sup> and the peer-reviewed literature.

## Understanding of Allegations

It is my understanding that Plaintiff, the FTC, alleges that Billing Services Group Limited (BSG) and its affiliated clearinghouses<sup>2</sup> provided clearinghouse services for a group of third-party service providers that sold products and services whose terms of service were not disclosed clearly and conspicuously.<sup>3</sup> Plaintiff further alleges that purportedly low usage rates for the advertised products and consumer complaints should be taken as evidence that

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<sup>1</sup> It is my understanding that the subject products and services were marketed through on-line advertising provided by Smiley, which placed ads on publisher websites.

<sup>2</sup> It is my understanding that a "clearinghouse" is a company that contracts with a service provider to enable the service provider's charges for services provided to consumers or end users to appear on the consumers' telephone bill.

<sup>3</sup> Federal Trade Commission's Motion For An Order To Show Cause Why Billing Services Group Limited; Billing Services Group North America, Inc.; HBS Bill Services Company; Enhanced Billing Services, Inc.; Billing Concepts, Inc.; and ACI Billing Services, Inc. Should Not Be Held In Contempt ("Brief in Support"), pp. 1-2, 18-19

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consumers were “crammed;” that is, that consumers were billed for products and services to which they subscribed unwittingly and unintentionally.<sup>4</sup> Plaintiff is critical of the specific user experience design of the subject webpages.<sup>5</sup> Exponent was retained to assess specifically the allegations made by the FTC; and I have been asked to address these criticisms from a human factors and human computer interaction perspective.

## OPINIONS AND BASES

### **1. The design of the subject webpages is adequate and appropriate to alert reasonable consumers to the consequences of their actions.**

I used the ‘MyEmail.com’ workflow produced as FTCPROD-HBS-0003214 as the basis for an expert review of the design of the Smiley-brokered advertisements presented to users as part of that workflow. This expert review was guided by principles of design, as described in published works on user interface design, and which I applied in my eight years as a user experience professional. Such an expert review can be formalized as a ‘heuristic evaluation’, so called because it measures a candidate design against established heuristics – or best practices – of design.<sup>6</sup> Of the heuristics commonly employed, the one most germane to the present case is the visibility of the system state:<sup>7</sup> the question of whether users are sufficiently apprised of “what is going on with the system.”<sup>8</sup> Within the context of the present litigation, this question becomes one of whether the design adequately communicated to a reasonable consumer that he or she was temporarily leaving the workflow of an initial online vendor to evaluate optional offers from advertisers, and that there were certain terms and conditions that applied to the acceptance of such offers.

One of the strongest visual cues to the owner of a webpage is its branding. As slides 2 through 6 of FTCPROD-HBS-0003214 show, the design of MyEmail employs soft color tones, such as light sky blue and white; rounded edges, such as those on the bounding boxes for the signup forms and the outlines of the buttons; color gradients, such as those on the page background and buttons; as well as cloud- or sky-themed images, either on the welcome panel (slide 2), or as the background for the signup forms on the subsequent pages (slides 3-6). This design stands in stark contrast to the visually barren, rectilinear design of the advertisements, which employ predominantly the colors black, white and red, sharp edges all around, crudely styled controls (e.g., submit button), and any absence of any adornment such as background images of clouds. The difference in visual branding becomes quite apparent in a comparison of the left and right panels of Figure 1. Observers should be able to apprehend the difference between the two disparate designs even at a very cursory glance, given that they employ rather different and characteristic visual features: Scientific research has shown that the analysis of visual scenes by the human visual system operates very rapidly, and on the basis of crude distinctions, such as

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<sup>4</sup> Brief in Support, pp. 2-4, 6-7

<sup>5</sup> Brief in Support, pp. 10-11, 18-19

<sup>6</sup> Nielsen & Molich (1990); Zhang et al. (2003)

<sup>7</sup> E.g., Zhang et al. (2003)

<sup>8</sup> Zhang et al. (2003)

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the ones between the two panels in Figure 1.<sup>9</sup> The rather evident break in branding, when transitioning from the MyEmail webpages to the subsequent advertisements, signals strongly to the user that he or she has transiently left the MyEmail workflow and is now “respond[ing] to ... optional questions” pertaining to “offers [that] are optional” and for which the user can “[s]ign up if [he or she] [is] interested,” as described at the very top of the advertisement.

The figure consists of two side-by-side screenshots of webpages. The left screenshot is from MyEmail.com and shows a 'Signing up is Free!' form. It has a light blue background with a white form area. The form includes fields for First Name, Last Name, Email Address (with a @myemail.com placeholder), Password, Security Question (with a dropdown menu), Birthdate (with a date picker), Gender (with a dropdown menu), ZIP Code, and a CAPTCHA. A 'Create my account' button is at the bottom. The right screenshot is from eProtectID.com and shows a 'Your Email Account is Almost Ready!' page. It has a white background with a light blue header. The page includes a progress bar with several steps, some of which are marked with green checkmarks. A 'SUBMIT AND CONTINUE TO NEXT PAGE' button is at the bottom.

**Figure 1.** Side-by-side comparison of the MyEmail (left) and eProtectID advertisement (right) pages. The difference in visual branding is readily apparent.

Once the user has left the MyEmail webpages and transitioned to the advertisers' webpages, what becomes apparent is that the layout of the advertisement webpages is structured in a relatively consistent fashion across different offerings. Each advertisement is divided visually into an upper and a lower portion. Both sections are delineated by the use of an enclosure: a rectangle drawn around the respective section. The outlines of these rectangles are rendered in different colors. The contents of the rectangles thereby form separate groups: Enclosure has been known since the 1920s as one of the principles upon which the visual system coalesces objects into groups (hence, “grouping principle”).<sup>10</sup> Scientific research has shown that people tend to search displays by searching first within one group and then moving on to the next group.<sup>11</sup> The examination of visual scan paths of users viewing webpages has shown, further, that, in conformance with Western conventions, people tend to read webpages from top to bottom (and from left to right).<sup>12</sup> The upper-rectangle-then-lower-rectangle reading order is reinforced by the use of large bold type-faced, uniquely colored lettering in the upper rectangle, which creates a visual hierarchy<sup>13</sup> among the different elements on the screen. Visual hierarchies represent a recommended method in design for structuring visual information, to

<sup>9</sup> E.g., Greene & Oliva (2009)

<sup>10</sup> See, e.g., Wong (2010)

<sup>11</sup> Treisman (1982)

<sup>12</sup> Joachims et al. (2005)

<sup>13</sup> Mullet & Sano (1995)

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increase reading speed, ease of access, and comprehension.<sup>14</sup> Scientific research has shown that readers use visual hierarchies, and that they adopt a more systematic strategy in searching for information than when the layout of text does not employ a visual hierarchy.<sup>15</sup> All of these design elements conspire to guide the user to the invitation to “respond to [the] optional questions” of the advertisement presented in the bottom rectangle, which is designated as “ADVERTISEMENT” by the corresponding label in the top right corner of the outline of the rectangle.

The first line of each advertisement in the lower rectangle is always a summary of the product or service being offered; for example, “PROTECT YOUR IDENTITY!”, “Enhance Firefox with the ShopAtHome Toolbar Plugin,” “GET HOT NEW TRUETONES, WALLPAPERS AND MORE FOR YOUR CELL PHONE,” etc. All of these products and services are clearly distinct from the free email account being offered by MyEmail. The material terms of the offer follow immediately below the product or service summary. Where the material terms are presented at the bottom of the lower rectangle, they are highlighted by the creation of a further subdivision; for example, by the use of (a) thick orange-red horizontal line(s) (e.g., slides 9 and 10). The use of hyperlinks, which are ubiquitous on the Internet,<sup>16</sup> identifies key phrases, such as “Terms & Condition” or “Privacy Policy,” as additionally available information not presented on the current page.<sup>17</sup> Users are quite familiar with this convention as a means of navigating between different pages of information. The standard hyperlink formatting of medium blue color and underlining isolates the hyperlinks visually against the otherwise black local context. Scientific research shows such local contrast to cause items to stand out against their immediate surroundings.<sup>18</sup>

## **2. The design of the subject webpages also complies with the FTC’s guidance on online disclosures.**

The FTC provides guidance on how to evaluate the effectiveness of online disclosures in a document titled, *Dot com disclosures: Information about online advertising*, first published in the year 2000 and later revised in 2013 as *.com disclosures: How to make effective disclosures in digital advertising*. In the 2000 version, the FTC advises that “[t]o make a disclosure clear and conspicuous, advertisers should: Place disclosures near, and when possible, on the same

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<sup>14</sup> Gribbons (1992)

<sup>15</sup> Hornof & Halverson (2003); Mullet & Sano (1995)

<sup>16</sup> Ling and van Schaik (2004) write, “Navigation accounts for 90% of all recorded web browser actions (Tauscher and Greenberg 1997). The most common method for navigating web pages is through the use of hypertext links (hyperlinks). Hyperlinks offer a significant advance over paper-based media as they allow users to decide upon whether and how they interact with a web page (Treloar 1999).” (p. 907).

<sup>17</sup> According to the 2000 FTC guidance, “a disclosure accessible by a hyperlink may be sufficiently proximate to the relevant claim.” (p. 8). In any event, the material terms of the subject offers (e.g., the monthly subscription costs) were not hyperlinked but disclosed in the immediate context of the respective advertisement, as recommended by the FTC guidance (refer to page 7 of the 2000 document). Even if all terms had been presented using hyperlinks, however, users are primed to look for hyperlinks, given ubiquity of hyperlinks in internet advertisements, as described in the main body of this report (and as evidenced by the statements, click behavior and eye gaze behavior of some of the participants in the usability study described below).

<sup>18</sup> E.g., Nothdurft (1993a, 1993b)

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screen as the triggering claim” (p. 1). In the 2013 version, the FTC’s advice on the placement of disclosures is: “as close as possible to the triggering claim” (p. ii). Given that the advertisements in question were discontinued in 2011,<sup>19</sup> the applicable guidance is the one from 2000. In both guidance documents, the FTC enumerates the factors the agency considers when evaluating whether a particular disclosure is clear and conspicuous; among these, the following four are applicable to the present case:

- the placement of the disclosure in the advertisement and its proximity to the claim it is qualifying
- the prominence of the disclosure
- the extent to which items in other parts of the advertisement might distract attention from the disclosure
- whether the language of the disclosure is understandable to the intended audience.

These four criteria also serve as a basis of the following evaluation of the subject advertisements. First, for the reasons discussed above, the presentation of the material terms of the agreements fulfills the proximity and prominence criteria of the 2000 and 2013 FTC guidance. Indeed, the material terms of the offer follow immediately below the product or service summary. Second, the material terms of the various offers are described in clear and unambiguous language, stating the consequences of accepting the offer and the user action that indicates an acceptance of the offer; for example, “... a low cost of \$14.95/month. Click ‘Submit’ to enroll Today!” To the extent that an offer involves a charge, the terms also include the method of billing; for example, “eProtectID is authorized to charge my local phone bill for services provided.” Both the material terms and, where applicable, the method of payment are part and parcel of the advertisement itself: They are not stated separately; they are described in the same continuous prose that details the advertised service or product. The consumer is told what he or she receives in terms of products and services, how much these will cost (including the frequency and how the charges will be billed), and that he or she can cancel at any time (and which means).

In addition to structuring the overall advertisement, perceptual grouping was also used to create an association between controls (i.e., buttons) demanding competing user actions (e.g., accept an offer, skip an offer). Such grouping is created by the spatial proximity between the controls,<sup>20</sup> which are presented one above the other, separate from the remainder of the page. Research shows that observers tend to attend first to groups of items, rather than to the individual items themselves.<sup>21</sup> In other words, users’ attention will be drawn to the submit/skip buttons as a collective; and users are consequently more likely to recognize that they are presented with an alternative, rather than a single path forward, of accepting the offer that is being shown to them.<sup>22</sup> For those users who opted to accept an offer, feedback was provided in

<sup>19</sup> Deposition of Stephen Oskoui, 8/16/2013 (rough) (“Oskoui”), p. 27

<sup>20</sup> See, e.g., Wong (2010)

<sup>21</sup> Treisman (1982); Navon (1977)

<sup>22</sup> Given this alternative, and especially within the context of an advertisement for an optional service or product visibly distinct from the MyEmail signup, “submit” – versus “skip” – unequivocally denotes a (re-)submission of

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form of a welcome email, which reiterated the material terms of the offer, as well as the method of cancellation.<sup>23</sup>

**3. An empirical evaluation of the subject webpages suggests that the terms of the products and services advertised are disclosed clearly and conspicuously.**

Although an expert review based upon generally accepted heuristics can identify many usability issues and provide valuable feedback about the design of a product, it is no substitute for a test of the product using prospective users. For example, what is prominent to a user, or whether a certain aspect of a design will distract users, are empirical questions: Scientific research has demonstrated that what draws attention (and, conversely, what does not draw attention) is often counterintuitive to laypersons and depends upon an observer's current goals or attentional "set."<sup>24</sup> Even ostensibly conspicuous objects, such as a red item in a display of exclusively white items on a black background, can fail to draw attention to themselves.<sup>25</sup> Similarly, a centrally presented gorilla beating its chest can prove incapable of distracting observers from their primary task of counting basketball passes between different team members.<sup>26</sup>

Likewise, whether users can glean the material terms of an offer from an advertisement needs to be investigated empirically, because comprehension will differ slightly for each person, and will likely differ from that of an expert. To that end, the American National Standards Institute (ANSI), the Food and Drug Administration (FDA), and Consumer Product Safety Commission, (CPSC), among others, all recommend user testing as a means for addressing comprehension.<sup>27</sup> Because not all users can be expected to comprehend a given communication effort, ANSI proposes a comprehension criterion of 85% of participants.<sup>28</sup>

The above expert review was therefore augmented by a usability test involving twelve naïve volunteers. The number of participants was based on the finding that, on average, most usability problems associated with a particular product are identifiable using (a minimum of) 12 participants.<sup>29</sup> The volunteers were recruited online, which ensured a modicum of familiarity with the Internet. The demographic breakdown of the study population roughly captured some of the diversity of the U.S. population in terms of sex, race, and age group.<sup>30</sup> The detailed breakdown of the demographics is provided in Table 1.

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personal information for the purposes of providing ("submitting") it to the provider of the advertised service or product, and, hence, accepting the offer.

<sup>23</sup> Welcome emails (FBI\_000003 – FBI\_000033)

<sup>24</sup> E.g., Folk et al. (1992); Most et al. (2005); Simons & Chabris (1999)

<sup>25</sup> Gibson & Jiang (1998); see also Rauschenberger (2003)

<sup>26</sup> Simons & Chabris (1999)

<sup>27</sup> See, e.g., ANSI Z535.3-2002; Backinger & Kingsley (1993); FDA (2001); CPSC (2003)

<sup>28</sup> ANSI Z535.3-2002

<sup>29</sup> Nielsen & Landauer (1993)

<sup>30</sup> Based on 2008 U.S. Census data (<http://www.census.gov/>) (accessed: 03/07/2013)

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Female : Male	8 : 4
White : Hispanic : Black	8 : 2 : 2
18 – 19 yo	1
20 – 34 yo	4
35 – 64 yo	5
65 – 84 yo	2

**Table 1.** Demographic breakdown in terms of gender, ethnicity and age.

For purposes of the usability test, the slides produced as FTCPROD-HBS-0003214 were converted into a semi-functional mockup using Axure RP ([www.axure.com](http://www.axure.com)). Participants were instructed to imagine that they were seated in the comfort of their own home and had come across the MyEmail website. They were not provided any additional instructions, apart from the request to ‘think out loud’, which constitutes a common approach in usability testing. It permits the study facilitator to glean insights into the moment-to-moment thought processes of the participant: his or rationale for clicking certain controls; his or her concerns or confusion about information presented; and his or her expectations about system behavior – in other words, insights that would otherwise elude direct observation. Gaze position was recorded for a subset of the participants using a SensoMotoric Instruments GmbH (SMI) iView X™ HED eye tracker. Participants were told that the baseball cap on which the head-borne eye tracker is mounted had affixed to it a camera that would record the computer screen. Once participants had arrived at the MyEmail welcome screen, they were presented with follow-up questions evaluating their awareness of the legal-financial implications of accepting the advertisements, as well as their prior experience with similar ad campaigns and their general Internet proficiency.

The most salient findings from the usability test are that a sizable majority of participants<sup>31</sup> spontaneously commented upon subscription costs, either while entering their information into the website or during follow-up questioning; that a large majority skipped all or most of the advertisements (i.e., did not accept them); that all but one participant spontaneously voiced skepticism or concern about the advertisements; and that nearly half of the participants spontaneously commented they would simply exit the site altogether in a non-study setting, rather than taking any action (i.e., entering data and/or clicking submit/skip). The 46% site abandonment rate observed in the present study corresponds closely to the 45% site abandonment rate for Smiley -brokered advertisements involving offers by CPA Market/Studio 127 (see below),<sup>32</sup> suggesting that the usability study results are a valid measure of the behavior of online users. A majority of study participants read the conditions of the offers; and all but

<sup>31</sup> As was revealed during follow-up questioning, Participant 2 employs a manager who reviews all of the obligations into which Participant 2 enters, online or offline. Participant 2 stated that he would never have responded to any of the online requests for information presented in the study without his manager first having reviewed them. Given the strong counterfactual nature of Participant 2’s participation, which rendered his responses and actions extremely contrived, they were not considered further.

<sup>32</sup> SMILEY\_000001 spreadsheet

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one, who commented, “I really didn’t pay attention,” knew where to find these conditions described. All but two participants thought the services and products advertised (including the free email account) were offered by different companies. Of the remaining two participants, one was unable to say, one way or the other, citing inattention; and the other surmised that it was possible they were all offered by different companies.

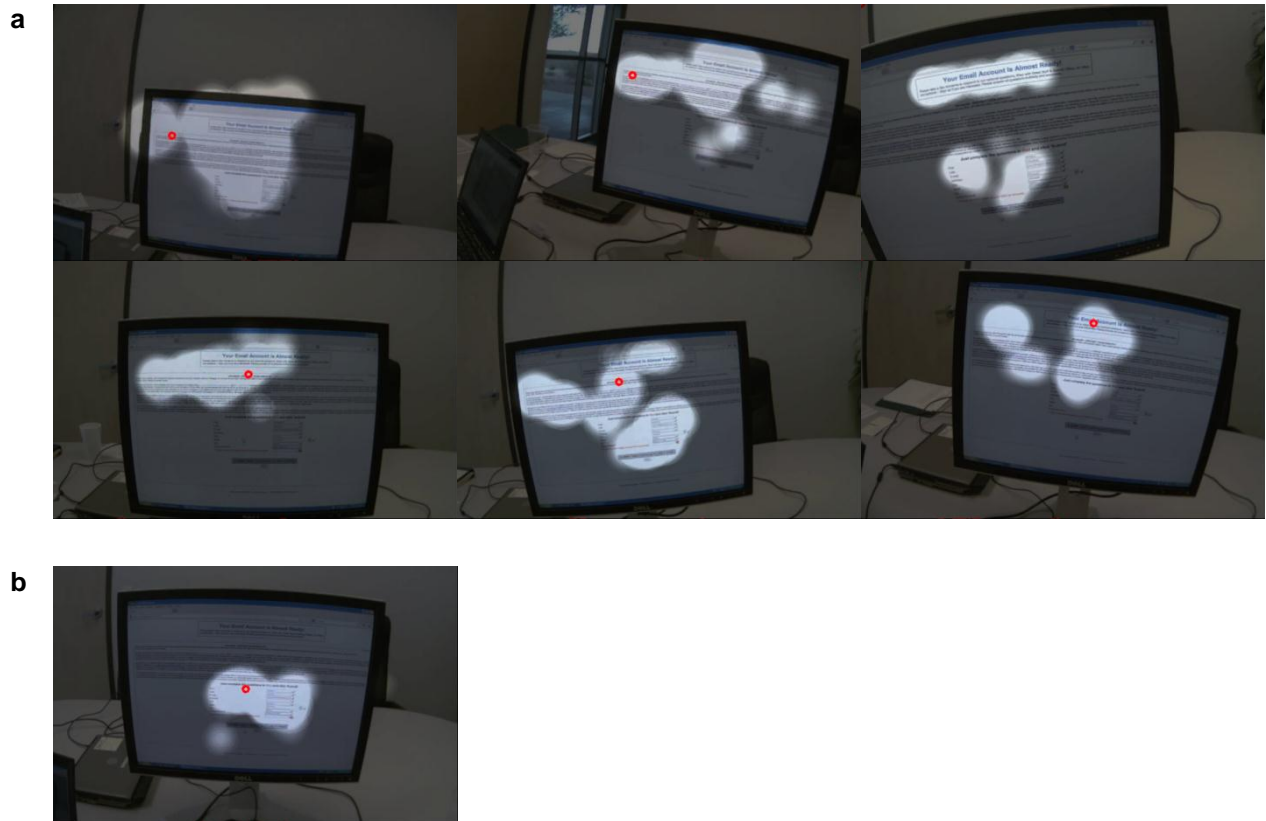
It is particularly noteworthy that, of the participants who read the conditions of the offers, all recognized that there were costs associated with the products and services advertised. Of those participants who recognized the presence of a cost, a large majority skipped all, or nearly all, of the offers. Of the participants who accepted some of the offers, even being apprised of the costs associated with some of them, one elected to download the Firefox toolbar (at no cost), after “carefully reading” the conditions, and requested Truetones, after pointing out that she had, after all, indicated a false cell phone number; one subscribed to eProtectID, after extensively reading the product description, as well as ShopAtHome, because she liked the offer; and one remarked, during follow-up questioning, that she knew she had accepted some of the offers. Curiously, one participant explicitly commented upon the cost for the eProtectID service but then subsequently subscribed to the service. The same participant declined all of the other offers. It stands to reason that she subscribed to the eProtectID service in error.

As indicated by some of the exceptions above, it is not the case that all participants necessarily regarded all products and services to be without value or merit. In addition to those expressions of interest mentioned above, two participants thought the bankruptcy protection offer might be valuable. Another participant thought that the charge for the identity protection service was a fair price. Yet another participant thought the survey participation offer “is worth a lot.” The rejection of an offer, in and of itself, does not permit any inferences about whether a user found the offer to be potentially interesting and worthwhile.

The time participants spent transitioning through the advertisement screens to the MyEmail welcome message is also informative. On average, those participants who voiced skepticism or concern took close to three minutes longer than those participants who did not. These differences suggest that cautious, meticulous users who take the time to read and deliberate the individual offers are less likely to accept them in error or out of carelessness.

A more fine-grained analysis is afforded by the eye tracking data collected for some participants. Typical scan paths for the first advertisement (eProtectID) – for the several-second epoch immediately following the first presentation of the advertisement page – are shown in Figure 2a for six participants. These scan paths clearly indicate that users do, in their initial survey of the page, notice, glance at, and presumably read, the textual information presented at the top of the page. Whether they translate the information presented to them in that location into prudent, appropriate, or even desired actions, is a different question. The test results discussed earlier do suggest that users who read the conditions appreciate the presence of a cost and take appropriate action. The exception of the participant who explicitly indicated her awareness of the cost yet entered her social security number and clicked ‘submit’ shows that

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**Figure 2. a.** Scan paths for six participants, superimposed on the first advertisements in the sequence, eProtectID, during the initial epoch after the appearance of the advertisement. The small red annulus represents the participants' current point of fixation. Greyed-out regions constitute areas of the display that have not been fixated in the 10 seconds prior to the time when the scan paths were documented. As can be seen from the figure, all six participants fixated the header; and five participants also glanced at the description of the conditions of the offer. The participant in the top right panel fixated the description of the conditions later during the eye scan sequence and commented upon the subscription cost but subsequently clicked 'submit'. **b.** Scan path for Participant 2. Note the absence of any fixations on the page header or the description of the conditions.

errors, however, can also occur, even in spite of attention to the conditions presented at the top of the page. These observations contrast with the behavior of Participant 2 (see Footnote 31), whose scan path is shown Figure 2b. As can be seen from the figure, this participant, who unwittingly accepted the eProtectID offer (as well as all of the other offers), paid little or no attention to the information presented at the top of the page. (He subsequently admitted that his eye sight is very poor.)

For three of the six participants shown in Figure 2a, as well as for Participant 2, the glances at the conditions for the eProtectID offer were further quantified by defining two Areas Of Interest (AOIs), corresponding to the page header (the upper rectangle) and the description of the conditions of the offer. Using the BeGaze™ eye tracking analysis software, glance durations were calculated for the AOIs. On average, the three users analyzed spent roughly half of their

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time looking at either the page header or the description of the conditions, out of the total time viewing the advertisement for eProtectID. Across the three participants, that proportion corresponds to 84 seconds, on average, or nearly a minute-and-a-half. By contrast, Participant 2 spent only 8% of his time looking at either the header or the description of the conditions, or a little over one second. Overall, Participant 2 spent only 13.5 second on the advertisement page for eProtectID, a little more than one sixth of the time the other three participants spent, on average, looking at the page header and the description of the conditions. The number of glances made to the header and to the description of the conditions is consistent with these dwell times: Whereas the three attentive participants made an average of 64 glances to these display regions during the time they dwelled on the eProtectID page, and made an average of 142 fixations in those regions,<sup>33</sup> Participant 2 made three glances and four fixations total.

In sum, these results suggest that the material disclosures in the subject advertisements are prominent; that users are not unduly distracted by other aspects of the displays; and that users are capable of understanding the disclosures if they elect to read them. They show that users are skeptical of online advertisements; are capable of discerning that the advertisements are separate from the MyEmail account signup; by and large read the conditions of the offers; and, if so, successfully avoid signing up for an unwanted service or product. They show, further, that consumers accept some offers, if these appeal to them, but are also capable of committing errors. The preponderance of these findings suggest that users are not disproportionately misled into believing the advertisements constitute part of the signup process for MyEmail and agreeing to conditions of which they are unaware. The latter scenario may certainly occur; but it is very likely the result of inattention, carelessness, and/or unsuitably imprudent online behavior, during a time when consumers are wary of online advertisers' motives and aware of, or should be aware of, such threats as phishing. Indeed, one participant explicitly mentioned phishing; the large majority spontaneously voiced skepticism or concern; over one third entered false information to protect themselves; and half were poised to exit out of the site rather than continuing with the workflow.

The alleged potential for deceptiveness in regard to the subject marketing initiative hinges in part upon the degree to which consumers are made not to appreciate that the interposed advertisements bear no true relationship to the act of signing up for the free email account (or whatever other products or services Smiley's publishers offer).<sup>34</sup> However, as the above results show, appropriately attentive users do not fail to notice that the advertisements are distinct from (the workflow for) the free email account for which they are signing up. The net overall

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<sup>33</sup> The fixation count includes all instances in which the landing position of the eyes was within the respective AOI, which includes instances in which the viewer was re-fixating within the same AOI without his or her gaze leaving the bounds of the AOI. The glances count, by contrast, includes only the initial fixation by which the eyes land within the AOI but any subsequent fixations within that AOI.

<sup>34</sup> All of the advertising screens, when presented in isolation (i.e., not as part of the MyEmail workflow), beg the question, for the consumer, of why he or she is being asked to submit personal information, which, in turn, would lead to a search for further context and thereby lead to the discovery of the advertisement text, which clearly states the consequences of submitting one's information. The advertisements, in and of themselves, therefore, cannot be deceptive.

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impression<sup>35</sup> to a reasonable consumer is that workflow has been temporarily diverted from the MyEmail signup to optional offers for which there is a subscription cost.

**4. Click-through and acceptance rates from Smiley reveal discerning and discriminating behavior on part of consumers.**

To examine the behavior of actual online visitors to the Smiley -brokered advertisement pages, I reviewed data collected by Smiley for advertisements by CPA Market/Studio 127. The data I reviewed were from the last twelve months the advertisements were run.<sup>36</sup> These data show that nearly 99% of the visits to those advertisement pages involved a user skipping over at least one, if not several, or even all, of the advertisements.<sup>37</sup> They show, further, that only a quarter of the site visits involved a signup, corresponding roughly to one quarter of participants in the usability study who had chosen to accept an offer for at least one of the advertised services and products. Finally, the data show that an almost equal proportion of site visits involved the acceptance of at least one offer in the face of the rejection of other offers. The extremely small difference between the latter two, nearly equal-sized proportions constitutes the number of site visits that resulted in an acceptance of all offers.

It is conceivable that the extremely small subset of consumers who accepted all of the offers were genuinely interested in purchasing all of services and products offered to them. It may be argued that it is unlikely that such a number of consumers actually wanted those products and services. Two circumstances render this possibility less implausible, however, than it may seem at first glance. First, some consumers were presented with a single offer, and others with as few as two or three,<sup>38</sup> so that accepting “all of” the offers translated into a relatively small number of accepted offers for those consumers. Second, the offers presented to consumers were preselected, based on the characteristics of the individual user, to provide the best possible fit for that user;<sup>39</sup> that is, to be maximally relevant to him or her. Relevance or fit for personal needs was cited by all of the usability study participants<sup>40</sup> as the primary determinant for their decision to accept or reject an offer. In addition to genuine interest or need, and as discussed in the following, there are other, scientifically established reasons for why some consumers might accept all of the offers, including inattention (as exemplified by Participant 2), a lack of motivation to read or heed statements about potentially negative consequences (as exemplified by the usability study participants who read the disclosures but who, by their own admission, were not too concerned about what they said), or human error (as presumably exemplified by the participant who commented upon the subscription cost for eProtectID yet clicked ‘submit’).

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<sup>35</sup> In its 2000 guidance, the FTC summarizes its position on the ‘clear and conspicuous requirement’ thusly: “The key is the *overall net impression* of the ad...” (p. 5; emphasis in the original).

<sup>36</sup> Cf. Oskoui, p. 27

<sup>37</sup> SMILEY\_000001 spreadsheet

<sup>38</sup> Oskoui, p. 56

<sup>39</sup> Oskoui, pp. 64

<sup>40</sup> Again, exempting Participant 2.

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## **5. People often do not heed statements about potential negative consequences.**

In many regards, the present allegations resemble a failure-to-warn claim: Plaintiff alleges, on behalf of consumers, that if a statement detailing the consequences of a user's actions had been provided that fulfills some ill-defined notion of clarity and conspicuousness, many users would have been deterred from taking those actions (i.e., from submitting their information). In contrast to traditional warnings, however, the consequence of the "warned-about" actions are desirable to at least some users; and the consumer receives a product or service that can be considered to possess some value. The consequence of "noncompliance" is therefore debatably not an injury, but rather a circumstance – albeit potentially undesirable to some consumers – that can be remedied post hoc.

That said, the literature on warnings effectiveness is instructive with regard to how people behave when presented with a message that is intended to deter them from taking a potentially self-injurious action. Real-world studies that have examined the effectiveness of a warning in changing a person's behavior are consistent in showing that warning information is generally ineffective in reducing accidents and injuries.<sup>41</sup> For example, warnings about the injuries associated with power lawn mowers<sup>42</sup> or the increased likelihood of roll-overs in Ford Broncos<sup>43</sup> failed to have any reliable effects on injuries or fatalities involving their use. More generally, large surveys of the available published literature on warnings effectiveness have concluded that none of the real-world observational studies included in these meta-analyses showed any substantial and unequivocal positive behavior changes as a result of warning labels or signs, and that most studies found no positive changes whatsoever.<sup>44</sup>

Even in instances in which one could contend consumers might be particularly motivated to heed warnings, they do not always do so. For example, a national telephone survey about the use of over-the-counter medications found that only 9%<sup>45</sup> of participants reported reading information about possible side effects prior to taking the medicine for the first time, even though 17% of respondents reported having previously experienced a negative side effect from taking over-the-counter medication.<sup>46</sup> Similarly, one study on food allergies found that between a quarter and a third of consumers with food allergies do not read labels on food packages to avoid foods to which they are allergic.<sup>47</sup> Another such study concluded that consumers with peanut allergies increasingly ignore warning labels.<sup>48</sup> Consequently, failures to heed explicit statements about negative consequences are not pressingly an indication of a lack of clarity, but rather reflect basic human behavior.

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<sup>41</sup> Arndt et al. (1998)

<sup>42</sup> Kerpelman (1978)

<sup>43</sup> Arndt et al. (1998)

<sup>44</sup> Ayres et al. (1998); see also McCarthy et al. (1984)

<sup>45</sup> Harris Interactive (2002), p. 19

<sup>46</sup> Harris Interactive (2002), p. 31

<sup>47</sup> Vierk et al. (2007)

<sup>48</sup> Hefle et al. (2007)

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Nor are such failures an indication that the conspicuity of the statements deserves, or even permits, improvement. Studies comparing the effectiveness of product warnings conforming to different formats, in particular ANSI Z535, have failed to find any effect of format on compliance.<sup>49</sup> The addition of an alert symbol ( $\triangle$ ) was not found to increase compliance levels either;<sup>50</sup> and the selection of color was not observed to influence behavior either.<sup>51</sup> An extensive review of over 120 studies on the capture of attention<sup>52</sup> found no evidence that static features like color or size – no matter how conspicuous – grab attention involuntarily. Rather, search appears to be guided by people's momentary goals, interests and needs.<sup>53</sup>

## **6. Unintended consequences can be the result of user error.**

Consumers need not outright ignore or defy statements apprising them of the consequences of their Internet transactions to accept offers unintentionally without those offers being deceptive. For example, a user may be fully aware of the implications of his or her acceptance, yet accept the offer against his or her intentions to the contrary. Scientific research has shown that a person's intentions and his or her behavior need not necessarily accord with one another.<sup>54</sup> The most commonly known dissociation between intention and action is what is known as an error. Generally, two distinct classes of error are recognized: mistakes and slips.<sup>55</sup> A mistake occurs when an unintended action is the result of a flaw in a person's thought process (e.g., against what is stated and against convention, a user concludes that 'submit' means 'skip' and therefore unintentionally submits his or her information in acceptance of an ad), whereas a slip when an action misses its intended target (e.g., a user intends to click 'skip' but accidentally clicks 'submit').<sup>56</sup>

Mistakes occur for a variety of reasons that include inattention, cognitive overload, the formation of inappropriate decisions, and other sources of error.<sup>57</sup> As Donald Norman writes, "Even when the person has full information of the state of the situation, mistakes ... can occur."<sup>58</sup> Some users no doubt made mistakes in accepting the advertised offers, without this unintended acceptance, however, being an indication that the offer was deceptive. In retrospect, these users would regard their actions as unintentional – but their lack of intention does not imply that they were given insufficient, inadequate, or otherwise flawed information. People frequently do, and in all contexts, make mistakes. The causes of slips are much the same as those for mistakes (inattention, overload, etc.). Similarly, without having been misled by the offer, users who committed slips would regard the outcome of their actions as unintended. A lack of intention does not imply deception, however – especially in the case of slips, where

<sup>49</sup> E.g., Huntley-Fenner et al. (2007); Shaver et al. (2006); Young et al. (2002)

<sup>50</sup> Friedmann (1988)

<sup>51</sup> Shaver & Braun (2000)

<sup>52</sup> Rauschenberger (2003)

<sup>53</sup> Folk et al. (1992); Bacon & Egeth (1994); Rayner et al. (2008)

<sup>54</sup> Reason (2003), Chapter 1; Webb & Sheeran (2006)

<sup>55</sup> E.g., Leape (1994); Norman (1980, 1981); Reason (2003), Chapter 1

<sup>56</sup> *Ibid.*

<sup>57</sup> *Ibid.*

<sup>58</sup> Norman (1980), p. 6

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users form the appropriate conclusion (whatever that may be for them) and merely execute the subsequent motor action incorrectly.

Within the context of the present case, user errors are not irreversible. If users committed errors, they could rectify them once they become aware of them. (If they wittingly and intentionally accepted the offer, without error, the method of cancellation was described to them directly in the main body of the advertisement; for example, “[Y]ou may cancel at any time, with no cost to you, by contacting us at 1-877-376-6505, writing to us at eProtectID Customer Service, 24078 Greenway Rd., Ste. 3, Forest Lake, MN 55025 or emailing us at customerservice@eProtectID.com.”) Upon acceptance of any offer, the respective advertiser communicated the method of cancellation to the user.<sup>59</sup> It is my understanding that some of the consumers who accepted offers successfully cancelled their free trial membership before the end of the evaluation period, demonstrating that the original offer terms, emails or letters had been read by consumers. Customer service records pertaining to consumers who called to cancel their subscriptions show, further, that consumers who became aware of their commitment only after being charged were also, ultimately, aware of this method of recourse.<sup>60</sup> Indeed, the FTC, in the Fact Appendix to the Brief in Support reports that “‘customers’ sought and received credits for at least some of the ... billings...”<sup>61</sup> I understand that the telephone companies, the billing clearing houses, and the service providers had an aggressive refund policy, under which very few requests for refunds were denied.

## **7. Non-usage is not a sign of error or a lack of initial intent.**

Consumers who did not subscribe to an advertised service or product in error but were fully conscious of the details of their transaction may nevertheless not make use of their subscription, without their behavior pressingly suggesting that they accepted the offer unwittingly, as a result of deception. Purchases of unused products are quite frequent.<sup>62</sup> The value forfeited in these instances can be rather large. Gift cards and vouchers in the hundreds of millions of dollars remain unspent.<sup>63</sup> In 2006, unredeemed gift cards valuing a total of \$43 million were reported as recognized income by Best Buy<sup>TM</sup>.<sup>64</sup> For 2009, essentially all of Marie Callender’s increase in net income of \$1.7 million was attributable to unredeemed gift cards.<sup>65</sup> Research has shown that people will pay not to go to the gym even after purchase of a membership.<sup>66</sup> Consequently, merely because a person does not actively take advantage of the value of a purchase or cancel an

<sup>59</sup> Welcome emails (FBI\_000003 – FBI\_000033)

<sup>60</sup> MASTER .wav SPREADSHEET\_Exponent

<sup>61</sup> Fact Appendix in Support of Motion For An Order To Show Cause Why Billing Services Group Limited; Billing Services Group North America, Inc.; HBS Bill Services Company f/k/a Hold Billing Services, Ltd.; Enhanced Billing Services, Inc.; Billing Concepts, Inc.; and ACI Billing Services, Inc., Should Not Be Held In Contempt, p. 44

<sup>62</sup> Trocchia & Janda (2002)

<sup>63</sup> Rolfe (2010)

<sup>64</sup> Best Buy<sup>TM</sup> Fiscal 2006 Annual Report, pp. 30, 65

<sup>65</sup> PR Newswire, August 28, 2009

<sup>66</sup> Della Vigna & Malmendier (2006)

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(unused) membership does not mean that the purchase was unintentional at the time it was made.

Studies of consumer financial investment behavior provide other examples of consumer inactivity. Analyses of 401(k) investment behavior have concluded that some employees do not enroll in an employer-sponsored plan even though it is in their financial interest to do so. Other employees, who are automatically enrolled, will persevere with the default setting of their investment plan, even though it may not be the most attractive option. This type of behavior has been described as inertia.<sup>67</sup> Inert users accepted the offer conditions freely and wittingly, did not forget to cancel, but merely remained inactive.

#### **8. Complaints can be the result of post-purchase changes in attitude.**

Lastly, consumers may subscribe to a service wittingly and intentionally, without committing an error, and yet complain about having been deceived. The literature on so-called cognitive dissonance describes instances in which a consumer makes a purchase and later experiences remorse over his or her purchase.<sup>68</sup> This phenomenon has also been referred to as buyer's regret.<sup>69</sup> A disconnect arises between the buyer's actions and attitudes; this dissociation is experienced subjectively as unpleasant or even painful.<sup>70</sup> To ease this discomfort and to bring accord into the dissonant relationship between action and disposition, the buyer rationalizes his actions post hoc to comply with his or her current attitude: The buyer may attribute his or her actions to an external source, such as an overly persuasive salesperson or a purportedly deceptive advertisement. The logic of this transformation operates as follows: "I cannot believe I purchased this service. This is not something I would do. Therefore, I must have been deceived into buying it." As a result, the consumer's complaint becomes untruthful, without the consumer lying per se.

Scientific research on cognitive dissonance has shown that cognitive dissonance is present in a significant minority of buyers post-purchase.<sup>71</sup> There are scientifically principled reasons to believe that greater dissonance may be evoked in online settings than in more traditional retail settings.<sup>72</sup> In one study of buyer regret, nearly 10% of buyers experienced strong dissonance after using a product they had wittingly and intentionally purchased; and roughly 82% of respondents displayed low levels of dissonance.<sup>73</sup> Another study found that 27% of furniture buyers and 40% of car stereo buyers in the study experienced some form of dissonance.<sup>74</sup> Both studies found dissonance to set in only some time after the purchase, which means purchasers could initially be content or ambivalent about their purchase decisions and eventually grow more dissatisfied with them increasingly experience the need to complain.

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<sup>67</sup> Choi et al. (2004); Madrian & Shea (2000)

<sup>68</sup> Salzberger & Koller (2005); Soutar & Sweeney (2003)

<sup>69</sup> Soutar & Sweeney (2003)

<sup>70</sup> Salzberger & Koller (2005); Soutar & Sweeney (2003)

<sup>71</sup> *Ibid.*

<sup>72</sup> Soutar & Sweeney (2003)

<sup>73</sup> Salzberger & Koller (2005)

<sup>74</sup> Soutar & Sweeney (2003)

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Research on complaining, in turn, has shown that “many complaints do not reflect people’s true attitudes toward the object ... in question but rather involve attempts to elicit particular interpersonal reactions from others,” and that “if a person is perfectly satisfied with a relationship ... but perceives that expressing dissatisfaction will nonetheless allow him or her to achieve some desired outcome ..., he or she will voice dissatisfaction.”<sup>75</sup> On this view of complaining, underlying the act of complaining is a cost-benefit analysis; and the act of complaining is a utilitarian behavior. It has been proposed that some complaints are consistent with excuse-making.<sup>76</sup> As a face-saving effort, they serve to reconcile dissonant conditions: “I am not the type of person to make such a lamentable purchase” versus “I obviously did make that purchase.” Complaining places the responsibility for the purchase on someone other than the purchaser,<sup>77</sup> allowing him or her to maintain that he or she, personally, would never have made such a purchase, had it not been for extenuating circumstances, such as the advertisement that led to the purchase being putatively deceptive. Indeed, the very act of complaining can lead to an adoption of the negative attitude being expressed,<sup>78</sup> so that the complainer comes to believe the revisionist fiction of the complaint. Consequently, as Kowalski (1996) points out, “people who use complaints as excuses are not necessarily being deceitful.” (p. 187).

#### **9. Complaints can also result because people do not always act in accord with their expressed intentions.**

Although complaints are aimed at establishing that consumers would have avoided their purportedly unwanted transactions, had they – so the allegation goes – been sufficiently apprised of the legal-financial consequences of their actions, such contentions are called into question by scientific research, which has demonstrated repeatedly that people’s testimony about their propensity to follow certain warnings does not match their own actions.<sup>79</sup> For example, drivers asked about their seatbelt use overestimate their own compliance.<sup>80</sup> Estimates of the discrepancy between reported and observed behavior are in excess of 10%.<sup>81</sup> In one particular study, 6% of divers who claimed that they always wear a seat belt were unbelted at the time of the interview.<sup>82</sup> They paradoxically gave their ‘always’ response even though they knew that the observer could see that they were presently not wearing one.

In another study, participants were given the following warning accompanying a hammer: “Caution! Do not proceed further. Ask for instructions before you continue this operation. It is important that you do not use this hammer to strike.”<sup>83</sup> They were asked to indicate whether they would comply and whether they thought others would comply. Slightly over 50% of participants responded that they would comply, and around 47% of participants thought others

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<sup>75</sup> Kowalski (1996), p. 180

<sup>76</sup> Kowalski (1996)

<sup>77</sup> *Ibid.*

<sup>78</sup> *Ibid.*

<sup>79</sup> Frantz et al. (2005); Ayres et al. (1990)

<sup>80</sup> Streff & Wagenaar (1989)

<sup>81</sup> *Ibid.*

<sup>82</sup> *Ibid.*

<sup>83</sup> Ayres et al. (1990)

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would comply. When actual compliance with the very same warning was measured in a second study,<sup>84</sup> it was found that none of the participants heeded the warning.

Similar findings have been made with regard to online transactions. One study investigating the “privacy paradox” asked participants about their willingness to disclose specific pieces of personal information in the first phase of the study.<sup>85</sup> Weeks later, the same participants were asked actually to provide those same specific pieces of information. The study found that participants’ self-declared reluctance to disclose personal information was contradicted by their later submission of such information.

#### **10. Allegations of deceptiveness from other industries have also failed to be substantiated.**

Allegations of deceptiveness have been investigated in a variety of different contexts in the past. One such context is bank overdraft fees, which have been decried as poorly disclosed and/or exploitative.<sup>86</sup> Consumers choose whether to have overdraft protection when they open their bank account. Yet, industry estimates of annual overdraft fees paid by consumers amount to an average of \$150 per checking account.<sup>87</sup> It appears, however, that in the majority of consumers, it is not a lack of awareness of the overdraft policies per se, but rather a lack of attention to account balances that place consumers in jeopardy of overdrawing their accounts and consequently enduring an overdraft fee.<sup>88</sup>

Similar concerns have been raised in connection with rental car advertisement disclosures, which were charged with failing to disclose material restrictions, such as mileage costs and geographic limitations, and often resulting in twice the advertised rate for the rental, owing to an omission of fuel charges, airport access fees, and other frequently encountered costs.<sup>89</sup> A study of proposed alternative disclosures found that “[a]t most, ... the commercial with no disclosure is only marginally deceptive.”<sup>90</sup> Ninety percent of the participants in the study already assumed anyway that restrictions or qualifications applied to the offer anyway; and participants were further well aware of the types of restrictions likely to apply to such offers. Relatedly, a significant number of participants in the usability study of the subject webpages described above voiced skepticism or concern, indicating that they expected their submission of information not to be inconsequential. Even without disclosures, consumers have a tendency to be cautious; whether this trepidation translates into corresponding action is a different question altogether.

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<sup>84</sup> Dorris & Purswell (1977)

<sup>85</sup> Norberg et al. (2007)

<sup>86</sup> Stango & Zinman (2011)

<sup>87</sup> *Ibid.*

<sup>88</sup> *Ibid.*

<sup>89</sup> Murphy & Richards (1992)

<sup>90</sup> *Ibid.*, p. 371

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## SUMMARY AND CONCLUSIONS

In summary, I offer the following conclusions and opinions with a reasonable degree of scientific certainty. With regard to the subject marketing employed and the design of advertisements placed by Smiley on its publishers' websites:

- An expert review, empirical data from a usability study, and the data provided by Smiley all indicate that:
  - Reasonable consumers are, or should be, aware of the fact that the initial workflow from the landing page is interrupted by unaffiliated advertisements.
  - Reasonable consumers are adequately and appropriately apprised of the consequences of clicking 'submit', versus skipping to the next advertisement. That is, the design of the subject webpages renders the advertisement-related disclosures clear and conspicuous.
- The placement of the disclosure of the material terms of the offers was within the advertisement text itself, thereby complying with the FTC's proximity criterion.
- Usability study results and eye tracking data indicate that the disclosures were prominent, and that users were not distracted from them by other aspects of the design of the advertisements.
- Non-use of services or products purchased by consumers should not be taken as evidence that these services and products were purchased unwittingly and unintentionally.
- Consumer complaints are not always an indication of dissatisfaction, and may reflect post-purchase changes in attitude about an intentional and witting purchase.

Sincerely,



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Enclosures (2)

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### **List of Materials**

- Federal Trade Commission's Motion For An Order To Show Cause Why Billing Services Group Limited; Billing Services Group North America, Inc.; HBS Bill Services Company; Enhanced Billing Services, Inc.; Billing Concepts, Inc.; and ACI Billing Services, Inc. Should Not Be Held In Contempt
- Fact Appendix in Support of Motion For An Order To Show Cause Why Billing Services Group Limited; Billing Services Group North America, Inc.; HBS Bill Services Company f/k/a Hold Billing Services, Ltd.; Enhanced Billing Services, Inc.; Billing Concepts, Inc.; and ACI Billing Services, Inc., Should Not Be Held In Contempt
- Subpoena to Smiley (BCI\_000204 – BCI\_000206)
- Depositions
  - Chen, Andrew, 8/5/2013
  - Coleman-Ackerman, Cathy, 7/3/201
  - Oskoui, Stephen, 8/16/2013 (rough)
- Declaration of Stephen Oskoui (FTC\_APP\_002445 – FTC\_APP\_002474)
- FTC orders
  - 1999 order
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- Production from FTC
  - Email (FTCPROD-HBS-0003213)
  - Email (FTCPROD-HBS-0003280)
  - Email chain (FTCPROD-HBS-0003387 – FTCPROD-HBS-3401 )
  - Email chain (FTCPROD-HBS-0003583)
  - LiveHealthClub.com registration flow (FTC-HBS-0001699 – FTC-HBS-0001709)
  - Flow of Myemail.com (FTCPROD-HBS-0003214 Mockup att to 3213)
  - PowerPoint "Flow of Myemail.com" (FTCPROD-HBS-0003214)
- BSG Best Practices (INV\_002100 – INV\_002107)
- Due diligence checklist (BCI\_022890)
- Due diligence files (BCI\_022649 – BCI\_022754, BCI\_022890 – BCI\_023030, BCI\_023031 – BCI\_023173, BCI\_023174 – BCI\_023341, BCI\_023591 – BCI\_023734, BCI\_023735 – BCI\_023842, BCI\_023843 – BCI\_023954, BCI\_024092 – BCI\_024222)
- LEC approvals of Landeen Entity Marking
  - Email from Patrice McConnell to SubCIC Submittals, dated 7/17/2008
  - Email from Patrice McConnell to SubCIC Submittals, dated 10/22/2009
  - Email from Patrice McConnell RE: EMBARQ CIC 0882 SUBCIC 0979 (no date)
  - Email from Debbie Hartman to SubCIC Submittals, dated 2/24/2010
  - BCI\_023108 – BCI\_023116
  - BCI\_023788 – BCI\_023789
  - BCI\_023796 – BCI\_023800
  - BCI\_023896 – BCI\_023902
  - BCI\_024038 – BCI\_024039
  - BCI\_024041 – BCI\_024045

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- FBI files (FBI\_000003 – FBI\_000033)
- FBI Slade Cutter and John Papworth interview
- 1760 FBI WAV files
- MASTER .wav SPREADSHEET\_Exponent
- Smiley insertion orders and invoices (FTC-HBS-0001588 – FTC-HBS-0001650)
- Welcome emails (FBI\_000003 – FBI\_000033)
- Examples of marketing materials (BCI\_006379, BCI\_007046 – BCI\_007048, BCI\_008513 – BCI\_008515, BCI\_009626 – BCI\_009627, BCI\_9638)
- Smiley response (PLDG\_000001 – PLDG\_000035)
- BCI\_023048, BCI\_023054 – BCI\_023056, BCI\_023059, BCI\_023062 – BCI\_023067, BCI\_024007, BCI\_024010 – BCI\_024012
- Smiley data (SMILEY\_000001)
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**Robert Rauschenberger, Ph.D.**  
**Managing Scientist**

**Professional Profile**

Dr. Rauschenberger specializes in visual attention, visual perception, and human cognition, with 15 years of research on the topics of involuntary distraction, the conspicuity of visually presented information, and cognitive engineering in product design. Dr. Rauschenberger's specific expertise in product design includes healthcare products, consumer products, and automotive products. Dr. Rauschenberger has performed usability testing, human factors evaluations, workflow studies, and measured reaction times and error rates in a variety of domains to minimize the risks in the interaction of humans and their environment, such as during medical or safety-related procedures, and in the use of consumer products. He specializes in applying these methodologies to the design of products and the evaluation of their safety risk, as well as to the design and study of the effectiveness of warnings and safety information.

Dr. Rauschenberger is presently program chair of the Healthcare Technical Group of the Human Factors and Ergonomics Society. He held the position of Adjunct Professor at the School of Interactive Arts and Technology at Simon Fraser University from 2008 through 2011. Prior to joining Exponent, Dr. Rauschenberger was a Principal Research Scientist at Siemens Corporate Research, an Associate at Harvard University, a Visiting Scholar at MIT, and a Research Social Scientist at The University of Arizona; was the recipient of a National Science Foundation research grant; and was the co-investigator on a multi-year Department of Homeland Security contract to facilitate the interdiction of person-borne improvised explosive devices. He serves on the editorial board of *Attention, Perception & Psychophysics*, and has formerly served on the Grant Selection Committee of the Natural Sciences and Engineering Research Council of Canada. Furthermore, Dr. Rauschenberger has completed the core curriculum for the German law degree ("Grundstudium") at the University of Bonn (six semesters).

**Academic Credentials and Professional Honors**

Ph.D., Psychology, The Johns Hopkins University, 2001  
M.A., Psychology, The Johns Hopkins University, 1998  
B.A., Liberal Arts, Sarah Lawrence College, 1996

National Science Foundation Research Grant (2004–2007, as Principal Investigator)  
DHS Research Grant (as Co-PI), "Wide Area Surveillance and Suicide Bomber Detection"  
DHS Research Grant (as Co-PI), Center of Excellence for the Awareness and Localization of Explosives-Related Threats (ALERT)

## Languages

German – *Native Speaker*

## Publications

Rauschenberger R, Wood CT, Sala JB. Human factors and the design of medical devices. In: Bringing your medical device to market. Reiss JB (ed), pp. 215-226, Food and Drug Law Institute, 2013.

Kuzel MJ, Cohen H, Cohen J, Rauschenberger R. Evaluation of mobile eye tracking for forensic analysis of pedestrian falls. Proceedings, Human Factors and Ergonomics Society 57<sup>th</sup> Annual Meeting, San Diego, CA, 2013.

Heckman GM, Kim RS, Lin S, Rauschenberger R, Young DE, Lange R. Drivers' visual behavior during backing tasks: Factors affecting the use of rearview camera displays. Proceedings, Human Factors and Ergonomics Society 56<sup>th</sup> Annual Meeting, Boston, MA, 2012.

Kim R, Rauschenberger R, Heckman G, Young D, Lange R. Efficacy and usage patterns for three types of rearview camera displays during backing up. Proceedings, Society of Automobile Engineers World Congress, Detroit, MI, 2012.

Zheng XS, Kiekebosch J, Rauschenberger R. Attention-aware human-machine interface to support video surveillance task. Proceedings, Human Factors and Ergonomics Society 55<sup>th</sup> Annual Meeting, Las Vegas, NV, 2011.

Sala JB, Nichols EA, Muhammad R, Lakhiani SD, Rauschenberger R, Wood CT. Government, warnings, and safety information: A comparison of inter-agency regulations and guidance. In: Advances in Human Factors, Ergonomics, and Safety in Manufacturing and Service Industries. Karwowski W, Salvendi G (eds), pp. 1047–1056, CRC Press, 2010.

Rauschenberger R. Reentrant processing in attentional guidance—Time to abandon old dichotomies. Invited editorial. Acta Psychologica 2010; 135:109–111.

Rauschenberger R, Lin JJW, Zheng XS, Lafleur C. Subset search for icons of different spatial frequencies. Proceedings, Human Factors and Ergonomics Society 53<sup>rd</sup> Annual Meeting, San Antonio, TX, 2009.

Zheng XS, Chakraborty I, Lin JJW, Rauschenberger R. Correlating low-level image statistics with users' rapid aesthetic and affective judgments of web pages. Long Paper presented at the 2009 CHI conference, Boston, MA, 2009. (Nominated for Best Paper CHI 2009.)

Carlson TA, Rauschenberger R, Verstraten FAJ. No representation without awareness in the Lateral Occipital complex. Psychological Sci 2007; 18:298–302.

Zheng XS, Sapundshiev I, Rauschenberger R. WikiTable: A new tool for collaborative authoring and data management. *HCI 2007*; 15:501–508.

Zheng XS, Chakraborty I, Lin JJW, Rauschenberger R. Developing metrics to predict users' perceptions of interface design. *Proceedings, Human Factors and Ergonomics Society 52<sup>nd</sup> Annual Meeting*, New York, NY, 2008.

Rauschenberger R, Yantis S. Perceptual encoding efficiency in visual search. *J Exper Psychology: General* 2006; 135:116–131.

Rauschenberger R, Liu T, Slotnick SD, Yantis S. Temporally unfolding neural representation of pictorial occlusion. *Psychological Sci* 2006; 17:358–364.

Rauschenberger R, Chu H. The effects of familiarity on encoding efficiency in visual search. *Percept Psychophysics* 2006; 68:770–775.

Rauschenberger R, Mosca F, Peterson MA, Bruno N. Amodal completion in visual search: Preemption or context effects? *Psychological Sci* 2004; 15:351–355.

Rauschenberger R. When something old becomes something new: Spatiotemporal object continuity and attentional capture. *J Exp Psychology: Human Percept Perform* 2003; 29:600–615.

Rauschenberger R. Attentional capture by auto- and allo-cues. *Psychonomic Bull Rev* 2003; 10:814–842.

Rauschenberger R, Yantis S. Masking unveils pre-amodal completion representation in visual search. *Nature* 2001; 410:369–372.

Rauschenberger R, Yantis S. Attentional capture by globally-defined objects. *Percept Psychophysics* 2001; 63:1250–1261.

Enns JT, Austen EL, DiLollo V, Rauschenberger R, Yantis S. New objects dominate luminance transients in setting attentional priority. *J Exp Psychology: Human Percept Perform* 2001; 27:1287–1302.

## **Presentations**

Heckman G, Rauschenberger R, Kim R, Young D, Lange R. A comparative evaluation of rearview camera display locations: Collision avoidance outcomes and use patterns. Paper presented at the SAE Government/Industry meeting, Washington, DC, January 2012.

Rauschenberger R. Human factors in product design and liability: The role of attention. Paper presented at The West Coast Product Safety & Liability Conference: Presentations for Manufacturers by Leading Experts & Attorneys, Los Angeles, CA, March 2010.

Rauschenberger R, Yantis S. Attentional capture through levels of representation. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 1998.

Rauschenberger R, Yantis S. Search asymmetries revisited: A new theory of visual attention. Poster presented at the Annual Meeting of the Psychonomic Society, Los Angeles, CA, November 1999.

Rauschenberger R, Yantis S. What can search asymmetries really tell us? Paper presented at the Annual EPA Vision and Attention Meeting, Baltimore, MD, March 2000.

Rauschenberger R, Yantis S. Completing the picture: Representations of amodally completed objects in visual search. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 2000.

Rauschenberger R, Yantis S. What counts as a new object in the new-object hypothesis of attentional capture? Poster presented at the Meeting of the Vision Sciences Society, Sarasota, FL, May 2001.

Rauschenberger R, Peterson MA, Mosca F, Bruno N. A modified search task investigates an alternative to the two-stage model of amodal completion. Poster presented at the Annual Meeting of the Vision Sciences Society, Sarasota, FL, May 2002.

Schulz MF, Rauschenberger R, Peterson MA. Amodal completion in passively viewed displays: A priming study. Poster presented at the Annual Meeting of the Vision Sciences Society, Sarasota, FL, May 2002.

Liu T, Rauschenberger R, Slotnick SD, Yantis S. Neural signatures of amodal completion. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, New York, NY, March 2003.

Peterson MA, Rauschenberger R. Context effects on border assignment in the target stimulus in visual search. Poster presented at the Annual Meeting of the Vision Sciences Society, Sarasota, FL, May 2003.

Rauschenberger R, Liu T, Slotnick SD, Yantis S. Cortical representation of pictorial occlusions in early visual areas and LOC. Poster presented at the Annual Meeting of the Vision Sciences Society, Sarasota, FL, May 2003.

Skow-Grant E, Rauschenberger R, Peterson MA. Attention, not inhibition of return, tracks objects. Paper presented at the 11th Annual Workshop on Object Perception, Attention, and Memory, Vancouver, Canada, November 2003.

Rauschenberger R, Peterson MA. When unambiguous stimuli become ambiguous: Spatiotemporal context effects with nominally unambiguous stimuli. Paper presented at the Annual Meeting of the Vision Sciences Society, Sarasota, FL, May 2004.

Rauschenberger R, Chu H. The effects of familiarity on encoding efficiency in visual search. Poster presented at the Annual Meeting of the Vision Sciences Society, Sarasota, FL, May 2005.

Carlson TA, Rauschenberger R, Verstraten FAJ. Cortical adaptation of unconscious perceptual representations. Paper presented at the Annual Meeting of the European Conference on Visual Perception, A Coruña, Spain, August 2005.

Rauschenberger R, Lin JW. Workflow analysis for patients' visits in VAMC audiology departments. Paper presented at the Annual Meeting of the Association of VA Audiologists, Denver, CO, April 2007.

Chakraborty, I, Zheng XS, Lin J, Rauschenberger R. Computational eye movement model based on adaptive saliency map. Paper presented at the Annual Fall Vision Meeting, Berkeley, CA, September 2007.

### **Invited Presentations**

Rauschenberger R. Taking a "Q" from human factors: Visual search in HMI design. Keynote address for the HFES Regional Conference, California State University Long Beach, Long Beach, CA, February 2011.

Rauschenberger R. Taking a "Q" from human factors: Visual search in HMI design. Cognitive Science and Engineering Department, Arizona State University College of Technology & Innovation, January 2011.

Cognitive engineering for airport security screening. Simon Fraser University, Vancouver, BC, 2009.

When what you design is not what you get. Microsoft Research Lab, Redmond, WA, 2009.

An idiosyncratic perspective on visual search and perception. University of British Columbia, Vancouver, Canada, 2008.

An idiosyncratic perspective on visual search and perception. Notre Dame University, South Bend, IN, 2008.

When what you design is not what you get. Universität Bielefeld, Bielefeld, Germany, 2006.

When what you design is not what you get. Deutsche Luft- und Raumfahrtgesellschaft, Braunschweig, Germany, 2006.

When what you design is not what you get. SIAT, Simon Fraser University, Vancouver, Canada, 2006.

Dynamic interactions in visual search displays: When less is more. Yale University, New Haven, CT, 2005.

Dynamic representations of the visual world. University of Arizona, Tucson, AZ, 2004.

Dynamic representations of the visual world. Royal Holloway University, London, UK, 2004.

Dynamic representations of the visual world. University of Delaware, Newark, DE, 2004.

Dynamic representations of the visual world. University of St. Andrews, St. Andrews, Scotland, 2004.

Dynamic interactions in visual search displays. Michigan State University, East Lansing, MI, 2004.

When more is less: Visual search difficulty and exposure time. Siemens Corporate Research, Princeton, NJ, 2004.

An idiosyncratic perspective on visual search and perception. Vision Sciences Laboratory, Harvard University, Cambridge, MA, 2004.

Attentional capture by auto- and allo-cues. Visual Attention Lab., Harvard Medical School, Cambridge, MA, 2004.

Dynamic representations of the visual world. University of North Carolina, Chapel Hill, NC, 2003.

Masking unveils visual representations in the brain. University of Arizona, Tucson, AZ, 2001.

Masking unveils visual representations in the brain Sarah Lawrence College, Bronxville, NY, 2000.

### **Prior Experience**

Principal Research Scientist, Siemens Corporate Research, 2005–2009

Visiting Scholar, MIT, 2004–2005

Associate, Harvard University, 2004–2005

Research Social Scientist, The University of Arizona, 2004–2005

Postdoctoral Fellow, The University of Arizona, 2001–2004

### **Project Examples**

Evaluated the adequacy of warnings and their propensity to effect behavioral change within the context of failure to warn product liability litigation.

Investigated the heterogeneity of alleged classes of plaintiffs in class action lawsuits.

Assisted companies with development and evaluation of safety communication (warnings on products, user manuals) for consumer and healthcare products.

Assisted companies with 510(k) submissions to the FDA for clearance for marketing of medical devices by conducting human factors studies.

Assisted companies with their response to inquiries from government agencies (e.g., FDA) regarding the safety of their products, by conducting human factors evaluations and analyzing data from large databases of accident and adverse event records.

Designed healthcare and consumer products now deployed in the marketplace, and evaluated the safety of healthcare products in a product liability context, using, among other things, such technologies as eye-tracking and balance platforms.

Used scientific methods to study the factors that lead to distraction and inattention, as well as the factors that determine the efficiency of visual search (e.g., for warnings).

### **Academic Appointments**

- Lecturer, Drexel University, 2013
- Adjunct Professor, School of Interactive Arts and Technology, Simon Fraser University, 2008–2011

### **Editorships and Editorial Review Boards**

- Program Chair, Healthcare Technical Group, Human Factors and Ergonomics Society
- *Editorial Board Member, Attention, Perception & Psychophysics*
- Committee Member, Brain, Behaviour and Cognitive Science Grant Selection Committee, Natural Sciences and Engineering Research Council of Canada
- Organizing Committee, Conference for Object Perception and Memory
- Scientific Committee, European Conference on Visual Perception

### **Peer Reviewer**

- National Science Foundation
- Workshop on Object Perception, Attention and Memory (Co-Organizer)
- *Psychological Science*
- *Cognitive Psychology*
- *Journal of Experimental Psychology: Human Perception and Performance*
- *Vision Research*
- *Journal of Vision*
- *Visual Cognition*
- *Attention, Perception & Psychophysics*
- *Psychonomic Bulletin & Review*
- *acta psychological*
- *Experimental Psychology*
- *Emotion*
- *CHI*

- *Graphics Interface*
- *Scholarpedia*
- Human Factors and Ergonomics Society
- *Consciousness & Cognition*
- *PLoS ONE*

#### **Professional Affiliations**

- Human Factors and Ergonomics Society
- Psychonomic Society

#### **Past Affiliations**

- Association for Computing Machinery Special Interest Group on Computer-Human Interaction
- Association for Psychological Science
- Vision Sciences Society

**Previous Four Years of Deposition and Trial Testimony for Robert Rauschenberger, Ph.D.**

Last updated: September 12, 2013

<b>Depo Date</b>	<b>Trial Date</b>	<b>Case Name</b>	<b>Case Client</b>	<b>Court</b>	<b>Case #</b>
4/1/2013		Lowe v Mizuho	Roger Strassburg, PLLC	District Court Clark County, NV	A641342